

# Automating Software Maintenance in an HP Environment



- Introduction ..... 2
- Overview..... 2
  - HP Systems Insight Manager ..... 2
  - HP Version Control Agent ..... 3
  - HP Version Control Repository Manager ..... 3
- Security ..... 4
- Setting up Software Maintenance in the HP Environment ..... 5
- Maintaining the Software in an HP Environment ..... 7
- For More Information ..... 9
- Additional Information..... 9

## Introduction

Software maintenance is a key part of a system life cycle. The costs associated with maintaining system software images add overhead for businesses and individuals that own systems. Software maintenance solutions save time and money, enabling system users to focus on their competencies and relieving them of the need to develop expertise in maintaining information systems.

This document presents an overview of the HP strategy for software maintenance and a set of tools developed by HP that can help minimize the costs associated with software maintenance.

## Overview

Today's distributed enterprise networks are some of the most complex ever constructed. As companies deploy more business-critical applications, these networks continue to expand rapidly, becoming more sophisticated and requiring systems that support the latest technological innovations. In this fast-changing environment, any loss of availability translates into a loss of time and money, and manageability has become the leading success criterion for today's highly competitive businesses.

HP systems provide maximum uptime with minimal maintenance. HP has developed advanced system management technologies such as HP Systems Insight Manager, HP Version Control Repository Manager, and HP Version Control Agent. The tight integration of these advanced technologies reduces system management efforts, enabling administrators to work issues, resolve problems, and install system software from remote locations by means of a standard web browser.

## HP Systems Insight Manager

HP Systems Insight Manager is a web-based system management application that combines the strengths of Insight Manager 7, HP Tootools, and HP Servicecontrol Manager to deliver a single tool for managing HP ProLiant, HP Integrity, and HP 9000 systems running Microsoft® Windows®, Linux, and HP-UX. The core HP Systems Insight Manager software delivers the essential capabilities required to manage all HP server platforms.

When integrated with the Version Control Agent and the Version Control Repository Manager, HP Systems Insight Manager provides a proactive, easy-to-use, automated, and cost-effective solution for managing distributed systems and updating software on the managed systems remotely.

HP Systems Insight Manager transforms management of standards-based, distributed computing environments. By enabling browser access to its components, HP Systems Insight Manager provides efficient management of HP and third-party systems and groups of systems using Simple Network Management Protocol (SNMP), Desktop Management Interface (DMI), and Hypertext Transfer Protocol (HTTP), automatically consolidating and integrating the management data and displaying the information on demand. With HP Systems Insight Manager, you can monitor and manage groups of systems, clients, clusters, and networking products anywhere, at any time, from a standard web browser.

HP Systems Insight Manager is available on the HP Management CD 7.20 or later, and on the web at <http://www.hp.com/servers/manage>.

## HP System Management Homepage

The HP System Management Homepage is an intuitive web-based interface that consolidates and simplifies the management of individual ProLiant and Integrity systems running Microsoft Windows or

Linux operating systems. By aggregating data from HP Insight Management Agents, Version Control Agents, Insight Diagnostics and other management tools, the System Management Homepage provides a secure interface to review detailed hardware configuration and status data, performance metrics, system thresholds and software version control information. The System Management Homepage also provides access to HP Lights-Out Management processor on ProLiant and Integrity servers.

Administrators can access the System Management Homepage from the hardware status column and device pages of HP Systems Insight Manager or directly through a browser. The introduction of System Management Homepage 2.0 provides the following new functionalities that enhances security and simplifies the maintenance of HTTP security and HP management updates:

- User access based on operating system and SSL-secure authentication. This replaces the individual login and password method used with Management HTTP Server software.
- Browser-based communications to the System Management Homepage and integrated HP management tools through a single HTTP service. This replaces the Management HTTP Server model that used separate HTTP services for Insight Management Agents, Version Control Agents and other HP management tools integrated into the System Management Homepage interface.

HP System Management Homepage is available on the HP Management CD 7.20 or later, HP SmartStart CD, and on the web at <http://www.hp.com/servers/swdrivers>.

## HP Version Control Agent

The Version Control Agent is an Insight Management Agent that is installed on a system to enable you to see the versions of HP software and firmware that is installed on that system. The Version Control Agent can be configured to point to a repository being managed by the Version Control Repository Manager, enabling easy version comparison and software update from the repository to the system on which the Version Control Agent is installed.

The Version Control Agent provides version control and system update capabilities for a single HP system. The Version Control Agent determines system software status by comparing each component installed on the local system with the set of individual components or a specified Support Pack listed in the Version Control Repository Manager. You can also update individual components or entire Support Pack by clicking the install icon located next to the system software status icon.

The Version Control Agent is available on the HP SmartStart CD 7.20 or later, Software Update CD 7.20 or later, SmartSetup CD 3.20 or later, and ProLiant Support Pack at <http://www.hp.com/servers/swdrivers> or Integrity Support pack at <http://www.hp.com/support/itaniumservers>.

## HP Version Control Repository Manager

The Version Control Repository Manager is an Insight Management Agent that enables you to manage software from HP that is stored in a repository directory.

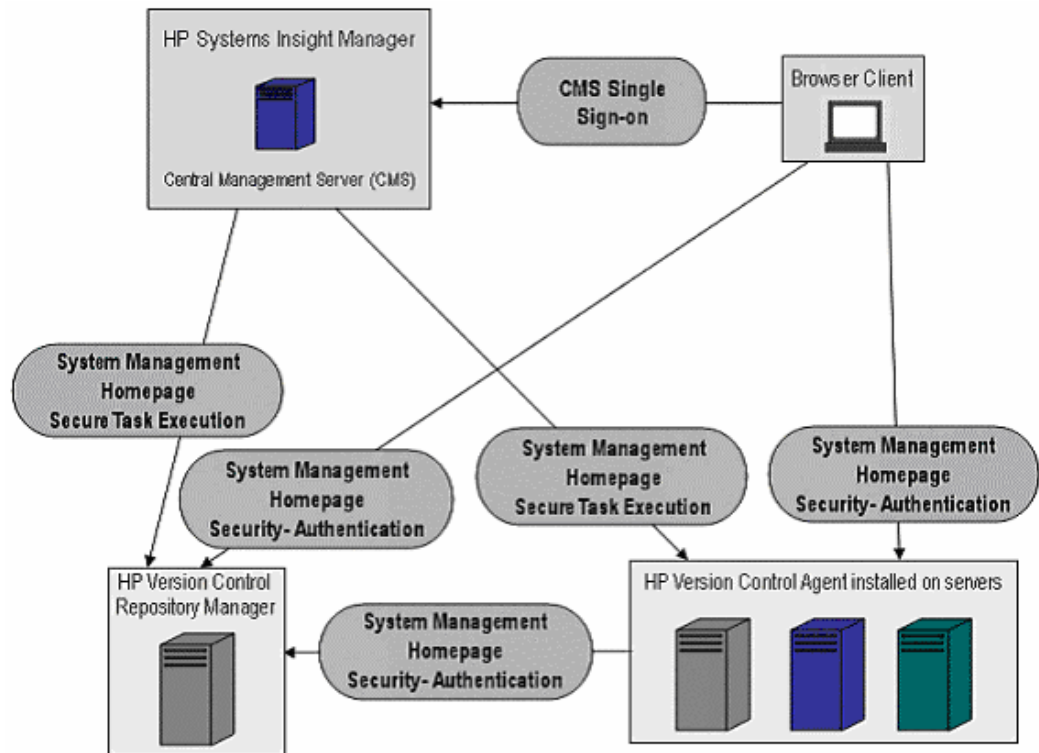
The Version Control Repository Manager catalogs system software and firmware that is stored on the system where the Version Control Repository Manager is running. The software and firmware can be manually downloaded from <http://www.hp.com/servers/swdrivers> directly to the file system, or you can use the Version Control Repository Manager to automatically download software or manually upload software from any web client. Software is organized into groups by function and operating system. You can view detailed information about each software component by clicking the software component's name. The Version Control Repository Manager also enables you to create customized groupings of software, which can then serve as a system software baseline for the entire managed environment or a subset of your environment.

The Version Control Repository Manager is available on the Management CD 7.20 or later, at <http://www.hp.com/servers/manage>. You can also install the Version Control Repository Manager during an HP Systems Insight Manager installation on Windows systems.

## Security

Three distinct types of secure connections are employed in the version control architecture as illustrated in the following diagram including:

- Secure Task Execution
- Security-Authentication
- Single Sign-on



All connections and data are transferred using Secure Sockets Layer (SSL) communications over HTTP. Interactive users connect using a web browser (client) application. The specific security depends on which web application they are browsing.

HP Systems Insight Manager uses operating systems authentication, based on the system where it is installed. Single sign-on enables a user that browses to the HP Systems Insight Manager system to follow links from that system to other managed systems without being prompted to login again. Single sign-on is enabled by configuring the System Management Homepage to trust that Central Management Server (CMS).

When the same user browses directly to a managed system, they must authenticate through the System Management Homepage, using an account and password that is valid on that system.

HP Systems Insight Manager communicates with Insight Management Agents, such as the Version Control Agent and the Version Control Repository Manager, using Secure Task Execution, which is enabled by configuring the System Management Homepage to trust that Central Management Server

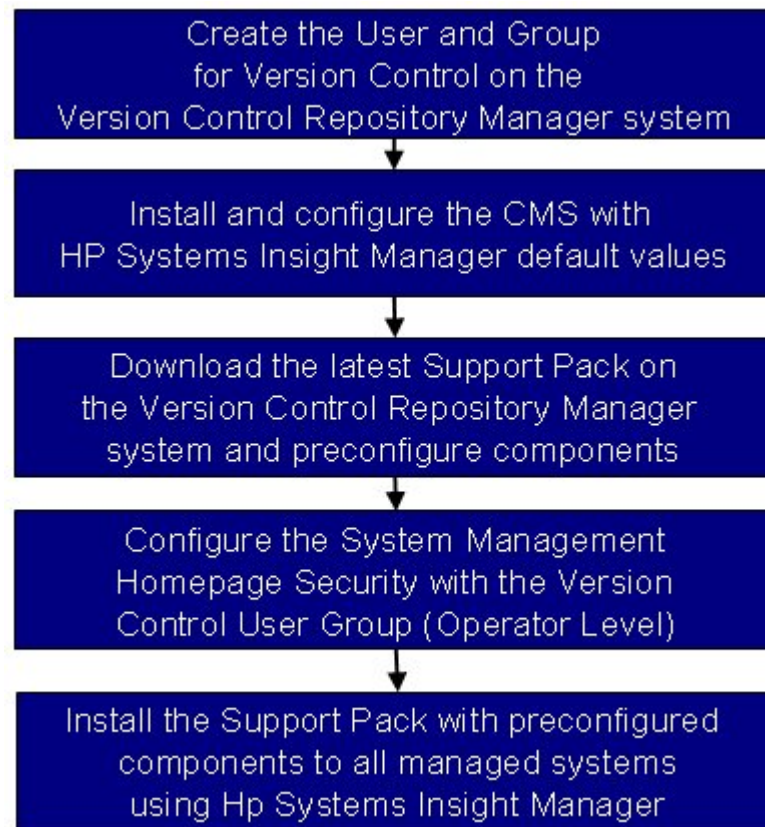
(CMS). Refer to the System Management Homepage Installation Guide for information regarding configuring the System Management Homepage.

Finally, when the Version Control Agent communicates with a Version Control Repository Manager, it acts as a client application, and requires the same kind of authentication information, such as an account and password, that an interactive user needs to login to the System Management Homepage on which the Version Control Repository Manager is installed. The System Management Homepage requires a valid operating system account and password. Refer to the *Version Control Agent online help* for more information regarding configuring these settings for the Version Control Agent.

For more information regarding the System Management Homepage, refer to the *System Management Homepage Installation Guide*. For more information regarding HP Systems Insight Manager, refer to the *HP Systems Insight Manager User Guide*.

## Setting up Software Maintenance in the HP Environment

If you are setting up your HP network initially, use the following flow diagram and steps as a guideline to ensure the network is set up correctly to manage as efficiently and effortlessly as possible.



1. Create the User Group and User account to use for Version Control. This is an account on the Version Control Repository Manager system that is used by Version Control Agents when communicating with the Version Control Repository Manager. This account must be configured in the System Management Homepage's security settings on the Version Control Repository Manager system. There are no special privileges required for the group or account except login. If you are using legacy installations of the Version Control Agent, you must create an account called **operator** or **user** so those agents can be configured. Otherwise, create an account such as **vcoperator** and add it to the group you have created. When the System Management

Homepage is installed for the first time, you can add this group to the Operator-level access group.

2. Install and configure the CMS using the default values. The HP Systems Insight Manager installation enables you to install and configure HP Systems Insight Manager.

**Note:** The HP Systems Insight Manager installation on a Windows system also enables you to install and configure the Version Control Repository Manager and System Management Homepage.

**Note:** Although you can configure multiple repositories, HP recommends that you initially install the Version Control Repository Manager on one system. All Version Control Agents should be configured to use this repository. If an internet connection exists, enable the auto-update feature so the Version Control Repository Manager automatically downloads the latest HP software, and the Version Control Agents can alert you through Systems Insight Manager when installed software is no longer current. When a single Version Control Repository Manager may not be sufficient, such as in large or remotely distributed enterprise networks, gradually add additional Version Control Repository Managers at appropriate locations, and configure them for automatic update or establish replication processes to ensure they have the most current software and firmware available from HP. Be sure to configure some of the Version Control Agents to use the additional Version Control Repository Managers.

3. Download the latest ProLiant Support Pack from <http://www.hp.com/servers/swdrivers> or Integrity Support Pack from <http://www.hp.com/support/itaniumservers> on the Version Control Repository Manager system and preconfigure the System Management Homepage and Version Control Agent components before installing to managed systems. Preconfiguring the components enables you to specify settings before installing the software on multiple managed systems so it is not necessary to configure the software on each individual system. For example, you can preconfigure the Version Control Agent to have preset settings such as a specified Version Control Repository Manager with a login account and password. You should specify the account that was created previously in Step 1.
  - For more information regarding preconfiguring the System Management Homepage, refer to the System Management Homepage Installation Guide located on the Management CD and at <http://h18013.www1.hp.com/products/servers/management/agents/documentation.html>.
  - For more information regarding preconfiguring the Version Control Agent, refer to the Version Control Installation Guide located on the Management CD and at <http://h18013.www1.hp.com/products/servers/management/agents/documentation.html>.
4. Configure the System Management Homepage's security settings to ensure that the User Group created previously in step 1, is listed in the Operator or Administrator-level access group. This ensures that the Version Control Agents that have been preconfigured are able to download and install software from the Version Control Repository Manager located on this system.
5. Initially install the latest Support Pack.
  - For Windows systems, install the latest ProLiant Support Pack or Integrity Support Pack with the preconfigured components to all managed systems using the HP Systems Insight Manager feature **Initial ProLiant Support Pack Install**.
  - For Linux systems, use the Linux Deployment Utility to install the latest Support pack with the preconfigured components to a local system. For more information regarding installing a Support Pack using the Linux Deployment Utility, refer to <http://www.hp.com/servers/psp>.

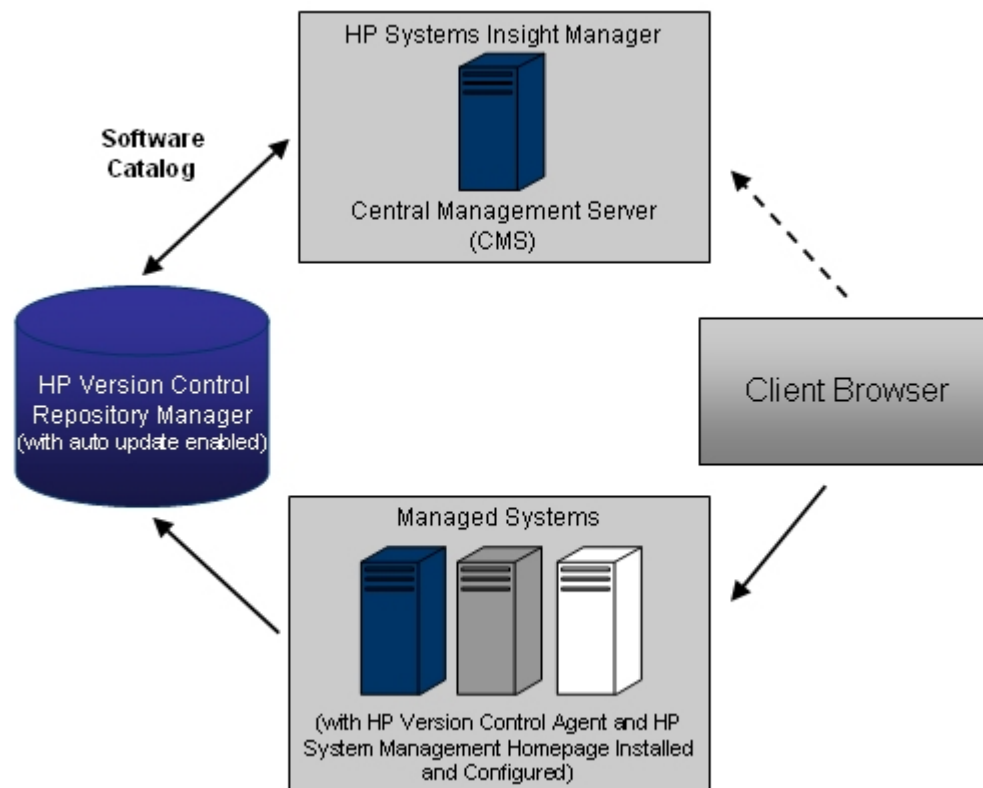
## Maintaining the Software in an HP Environment

For software versioning and updating, HP Systems Insight Manager relies on the Version Control Repository Manager and the Version Control Agent. By using these applications, HP Systems Insight Manager provides a single view of the software status for all managed ProLiant or Integrity systems, plus the capability to update software and firmware on those systems through its powerful query and task features. Updates can be scheduled and applied to specific sets of systems based on predetermined criteria, including applying updates only to those systems that require an update.

To take full advantage of the software update capabilities of HP Systems Insight Manager, ensure that:

- Every managed target system on the network has the Version Control Agent installed and is configured to use a repository
- Every system with a repository directory that is to be used has the Version Control Repository Manager installed
- The automatic update feature of the Version Control Repository Manager is enhanced to update all repositories with the latest software from HP automatically

The following diagram illustrates the interaction of HP Systems Insight Manager with the Version Control Repository Manager and the Version Control Agent to perform software updates.



HP recommends that you use the following steps to assist you with the most efficient means of software maintenance.

1. Make sure that one Version Control Repository Manager is installed and update the catalog with the latest software.

2. Make sure all managed systems have the Version Control Agent and System Management Homepage installed and configured.

Use the HP Systems Insight Manager **Replicate Agent Settings** tool to retrieve and edit Agent configuration settings from a source system and distribute that configuration remotely to one or more target systems where the Version Control Agent is already installed. This enables you to use settings from a system with the Version Control Agent installed and configured correctly to update other systems simultaneously with the good configuration. For example, you could use this feature to update all managed systems running the same operating system with the Version Control Agent installed with a configuration that specifies a Reference Support Pack for comparing installed software versions against a baseline set.

Note: To use this feature, be sure to replicate the agent settings to systems that are running the same operating system. For example, you would not want to replicate the agent settings from a SuSE Linux Enterprise Server 9 system to a Red Hat Enterprise Linux 3 system because the Reference Support Pack would not function correctly for the RHEL3 system.

3. Make sure the latest software is installed on all managed systems.
  - Use the HP Systems Insight Manager **Install Software and Firmware** tool to install the latest software, with preconfigured components, to all managed systems.
  - Or
  - Use the **HP Remote Deployment Utility** tool to install drivers or Insight Management Agents to managed Windows systems. Use the **HP Linux Deployment Utility** tool to install any drivers or Insight Management Agents locally on Linux systems.
4. If HP Systems Insight Manager is unable to communicate with a system or group of systems, you can use the HP Systems Insight Manager **Configure or Repair Agents** tool to repair the settings. This tool enables you to repair SNMP settings and trust relationships that exist between HP Systems Insight Manager and target systems. You can also update Insight Management Agent passwords on target systems that have 7.1 agents or earlier installed. For more information regarding the **Configure or Repair Agents** tool, refer to the ***HP Systems Insight Manager online help***.



## For More Information

- For more information regarding the HP software mentioned in this document, refer to the following sources:
  - HP Systems Insight Manager User and Installation Guide. This document provides information about installing and getting started using HP Systems Insight Manager. This guide includes an introduction to basic concepts, definitions, and functionality associated with HP Systems Insight Manager. This document is available at <http://docs.hp.com> or <http://www.hp.com/go/hpsim>.
  - HP Version Control Installation Guide. This document provides information about installing and getting started using the HP Version Control Agent and HP Version Control Repository Manager. This guide includes an introduction to basic concepts, definitions, and functionality associated with the Version Control Agent and Version Control Repository Manager. This document is available on the HP Management CD and at <http://h18013.www1.hp.com/products/servers/management/agents/documentation.html>.
  - HP Version Control Agent and HP Version Control Repository Manager Help System. The help systems provide a complete set of documentation for using, maintaining, and troubleshooting the Version Control Agent and the Version Control Repository Manager.
  - HP System Management Homepage Installation Guide. The System Management Homepage Installation Guide provides information about installing and getting started using the System Management Homepage 2.0. This guide includes an introduction to basic concepts, definitions, and functionality associated with Insight Management Agents, the Version Control Agent and Version Control Repository Manager. This document is available on the HP Management CD and at <http://h18013.www1.hp.com/products/servers/management/agents/documentation.html>.
  - HP ProLiant Support Pack and Deployment Utilities User Guide. The HP ProLiant Support Pack and Deployment Utilities User Guide provides information about installing ProLiant Support Packs. This document is available at [www.hp.com/servers/psp](http://www.hp.com/servers/psp).

## Additional Information

- Support Pack. Download the Version Control Repository Manager and the latest Support Pack, which contains the latest Version Control Agent and the HP Remote Deployment Utility at <http://www.hp.com/servers/swdrivers>. Read more about the Support Pack at <http://h18013.www1.hp.com/manage/psp.html>.
- Maintenance. Read about maintenance and support of HP products to include customer advisories, knowledge bases, and more at <http://itrc.hp.com>.
- Subscriber's Choice. Receive proactive notification by email each day regarding new items that are available at <http://www.hp.com/go/subscribe-gate1>.

© 2005 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Itanium is a trademark or registered trademark of Intel Corporation in the U.S. and other countries and is used under license.

5983-1651EEA1, 03/2005

